

Amendments to the Claims

1. (currently amended) A control program embodied on a computer readable medium for controlling an operation of a microprocessor, the control program comprising a concealed program recoverable by a data scramble circuit and a non-concealed program,

wherein the data scramble circuit is a single hardware circuit and at least a portion of the data scramble circuit is operative to perform both a data scramble function and an error correction function, and

wherein a recovered program from the concealed program includes:

at least a public function which is to be called from outside of the recovered program and an internal function which is to be called from inside of the recovered program; and

a relative address list indicating a relative address of the at least one public function in the recovered program, wherein the relative address list is provided at a prescribed location in the recovered program.

2. (canceled)

3. (currently amended) A device, comprising:

a microprocessor;

a program memory for storing a control program for controlling an operation of the microprocessor, the control program including a concealed program and a non-concealed program;

a rewritable memory for storing a copy of the concealed program copied from the concealed program stored in the program memory; and

a data scramble circuit for recovering the concealed program stored in the rewritable memory as a recovered program, wherein the data scramble circuit is a

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single hardware circuit and at least a portion of the data scramble circuit is operative to perform both a data scramble function and an error correction function, and

wherein the recovered program includes:

at least a public function which is to be called from outside of the recovered program and an internal function which is to be called from inside of the recovered program; and

a relative address list indicating a relative address of the at least one public function in the recovered program, wherein the relative address list is provided at a prescribed location in the recovered program.

4. (canceled)

5. (canceled)

6. (currently amended) A method for creating a control program, comprising:
a program descramble step of descrambling a portion of a control program by reverse scramble of a data scramble circuit in a device to be controlled, thereby creating a concealed program as a portion of the control program; and

a program storing step of storing the control program including the concealed program in a program memory so that the control program controls an operation of a microprocessor in the device to be controlled, wherein the data scramble circuit is a single hardware circuit and at least a portion of the data scramble circuit is operative to perform both a data scramble function and an error correction function, and

wherein a recovered program from the concealed program includes:

at least a public function which is to be called from outside of the recovered program and an internal function which is to be called from inside of the recovered program; and

a relative address list indicating a relative address of the at least one public function in the recovered program, wherein the relative address list is provided at a prescribed location in the recovered program.

7. (original) A method for creating a control program according to claim 6, wherein the program descramble step includes the steps of:

creating a non-concealed program; and

synthesizing the concealed program and the non-concealed program into the control program.

8. (currently amended) A method for operating a control program, comprising:

a program copying step of copying a concealed program which is a portion of the control program from a program memory into a rewritable memory;

a program recovery step of recovering the concealed program copied by the program copying step as a recovered program by a data scramble circuit; and

a program execution step of executing a non-concealed program included in the control program and the recovered program, wherein the data scramble circuit is a single hardware circuit and at least a portion of the data scramble circuit is operative to perform both a data scramble function and an error correction function, and

wherein a recovered program includes:

at least a public function which is to be called from outside of the recovered program and an internal function which is to be called from inside of the recovered program; and

a relative address list indicating a relative address of the at least one public function in the recovered program, wherein the relative address list is provided at a prescribed location in the recovered program.

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9. (original) A method for operating a control program according to claim 8, further comprising a program erasure step of erasing the recovered program from the rewritable memory.